

WE CLAIM:

1. A method for reducing delay during a multiple access attempt exchange in a sending device with a power device, a transmit clock, and a control device; and a link, the method comprising steps of:

- a. determining if the transmit clock is stopped;
- b. if the transmit clock is stopped, activating the power device; powering the transmit clock via the power device; and starting the transmit clock and synchronizing the transmit clock and associated PN generators with system time;
- c. sending one or more access probes from the sending device to a receiving device via the link; and
- d. deactivating the power device after lapse of a predetermined time interval measured by the control device.

2. The method of Claim 1, wherein the sending device operates in a CDMA wireless communication network.

3. The method of Claim 1, wherein the sending device further comprises a mobile telephone.

4. The method of Claim 1, wherein the receiving device further comprises a base station system.

5. The method of Claim 1, wherein the control device further comprises a timer.

6. The method of Claim 1, wherein the link further comprises an air interface link.

7. A method for reducing delay during a multiple access attempt exchange in a communication network having a base station system, an air interface link, and a mobile

station with a battery, a transmit clock, and a timer, the method comprising steps of:

- a. activating the battery's current flow to the transmit clock;
- b. starting the transmit clock and synchronizing the transmit clock and associated PN generators with system time associated with the communication network via the air interface link;
- c. sending a series of access probes from the mobile station to the base station system via the air interface link;
- d. setting a timer for a predetermined time interval;
- e. if a successive access is to be attempted,  
determining if the timer has expired;
- f. if the timer has expired, repeating preceding steps starting from step a;  
and
- g. if the timer has not expired, stopping the timer; and repeating the preceding steps starting from step c.

8. The method of Claim 7, wherein the predetermined time interval is selected from a range of one second to five seconds.

9. The method of Claim 8, wherein the range further comprises two seconds to four seconds.

10. The method of Claim 9, wherein the range further comprises approximately two seconds.

11. A method for multiple access attempts in a communication network, the method comprising steps of:

- a step for sending and receiving signals between a mobile station having a battery and a base station system via an air interface link; and

a step for governing the transmission of the signals by controlling activation periods of the battery's current flow to the transmit clock according to a predetermined time interval.

12. The method of Claim 11, wherein the step of governing the transmission of signals further comprises steps of:

a step for activating the battery's current flow to the transmit clock;

a step for starting the transmit clock and synchronizing the transmit clock and associated PN generators with system time after the battery's current flow to the transmit clock has been activated;

a step for sending a series of access probes from the mobile station to the base station system after the transmit clock has been started;

a step for setting the timer according to the predetermined time interval after the series of probes have been sent; and

a step for stopping the timer if successive access attempts are to be initiated and the timer has not expired.

13. The method of Claim 12, further comprising a step of selecting the predetermined timer interval from a range of one second to five seconds.

14. A mobile station with a sending device having a power device, the mobile station comprising:

a control device for controlling activation periods of the power device and controlling periods in which the sending device transmits signals to a base station system, the controlling device controlling such periods according to a predetermined time interval.

15. The mobile station of Claim 14, wherein the mobile station operates in a CDMA wireless network.

16. The mobile station of Claim 14, wherein the base station system further comprises a receiving device receiving the signals from the sending device.

17. The mobile station of Claim 14, wherein the link further comprises an air interface link.

18. The mobile station of Claim 14, wherein the mobile station further comprises a mobile telephone.

19. The mobile station of Claim 14, wherein the mobile station further includes a transmit clock.

20. The mobile station of Claim 14, wherein the control device further includes a timer.

21. The mobile station of Claim 14, wherein the predetermined time interval ranges from one second to five seconds.

22. A wireless communication network having a mobile station with a sending device; a base station system; and an air interface link, the sending device sending and receiving signals to and from the base station system, the wireless communication network comprising:

a battery for providing a power source;

a transmit clock for receiving the power source; and

a timer for controlling activation periods of the power device to the transmit clock and controlling periods in which the sending device transmits signals according to a predetermined time interval in a range of one to five seconds.

23. The wireless communication network of Claim 22, wherein the predetermined time interval further comprises approximately two seconds.

24. A wireless communication network having a mobile station with a sending device, a power device, a link, and a base station system having a receiving device, the sending device transmitting signals to the receiving device via the link, the wireless communication network comprising:

a set of timing modules for governing periods for transmission of the signals and controlling activation periods of the power device according to a predetermined time interval.

25. The wireless communication network of Claim 24, wherein the mobile station further comprises a transmit clock and a timer and the power device further comprises a battery.

26. The wireless communication network of Claim 25, wherein the set of timing modules further comprises:

an activation module for activating the battery's current flow to the transmit clock;

a start and synchronization module for starting the transmit clock and synchronizing the transmit clock and associated PN generators with CDMA system time after the activation module has activated the battery's current flow to the transmit clock;

a probe module for sending a series of access probes from the mobile station to the base station system after the start and synchronization module has started the transmit clock and synchronized the transmit clock and associated PN generators with CDMA system time;

a start timer module for setting the timer according to the predetermined time interval after the probe module has sent the series of access probes; and

a stop timer module for stopping the timer, deactivating the battery's current flow to the transmit clock, and stopping the transmit clock after the start timer module has started the timer.

27. The wireless communication network of Claim 26, wherein the predetermined time interval further comprises a discrete time element selected from a group including all discrete time elements in a range of one second to five seconds.

28. A wireless communication network comprising:

a mobile station for sending and receiving signals, the mobile station having mobile equipment comprising:

a battery;

a transmit clock; and

a timer;

a base station system for sending and receiving the signals to and from the mobile station;

an air interface link for carrying the signals to and from the mobile station and the base station system; and

a set of timing modules for governing the transmission of the signals, the set of timing modules comprising:

an activation module for activating the battery's current flow to the transmit clock;

a start and synchronization module for starting the transmit clock and synchronizing the transmit clock and associated PN generators with CDMA system time after the activation module has activated the battery's current flow to the transmit clock;

a probe module for sending a series of access probes from the mobile station to the base station system after the start and synchronization module has started the transmit clock and synchronized the transmit clock and associated PN generators with CDMA system time;

a start timer for setting the timer for a period of approximately two

seconds after the probe module has sent a series of probes and, upon expiration of the start timer, deactivating the battery's current flow to the transmit clock and stopping the transmit clock; and

a stop timer for stopping the timer if successive access attempts are to be initiated and the timer has not expired.

29. A system for reducing delay during a multiple access attempt exchange in a mobile station with a battery, a transmit clock, and a timer, the system comprising:

means for activating the battery's current flow to the transmit clock;

means for starting the transmit clock and synchronizing the transmit clock and associated PN generators with a system time associated with a communication network associated with the mobile station via an air interface link;

means for sending a series of access probes from the mobile station to a base station system via the air interface link;

means for setting a timer for a predetermined time interval;

means for deactivating the current flow from the battery to the transmit clock and stopping the transmit clock after expiration of the timer ;

means for determining if a successive access is to be attempted;

means for determining if the predetermined time interval has expired; and

means for stopping the timer if the timer has not expired.

30. The system of Claim 29, wherein the means for setting a timer further comprises means for setting a timer according to a predetermined time interval in the range of one to five seconds.

31. The system of Claim 29, wherein means for setting a timer further comprises means for setting a timer for a time period of approximately two seconds.

32. The system of Claim 29, wherein the communications network further comprises a wireless communication network.

33. The system of Claim 32, wherein the wireless communications network further comprises a CDMA wireless communications network.

34. A system for multiple access attempts in a communication network having a mobile station with a battery; a transmit clock; and a timer; a base station system; and an air interface link, the system comprising:

a set of timing modules for the transmission of the signals by controlling activation of a battery's current flow to the transmit clock according to a predetermined time interval.

35. The system of Claim 34, wherein the set of timing modules further comprises:

an activation module for activating the battery's current flow to the transmit clock;

a start and synchronization module for starting the transmit clock and synchronizing the transmit clock and associated PN generators with CDMA system time after the activation module has activated the battery's current flow to the transmit clock;

a probe module for sending a series of access probes from the mobile station to the base station system after the start and synchronization module has started the transmit clock and synchronized the transmit clock and associated PN generators with system time;

a start timer module for setting the timer according to the predetermined time interval after the probe module has sent a series of probes and deactivating the battery's current flow to the transmit clock and stopping the transmit clock upon expiration of the time interval; and

a stop timer module for stopping the timer if successive access attempts are to be initiated and the timer set by the start timer module has not expired.

36. The system of Claim 35, wherein the communications network further comprises a wireless communications network.



37. The system of Claim 36, wherein the wireless communications network utilizes CDMA protocol.

38. The system of Claim 36, wherein the predetermined time interval further comprises a discrete time element selected from a range of one to five seconds.

39. The system of Claim 36, wherein the predetermined time interval further comprises two seconds.

40. A set of timing modules in a mobile station, the set of timing modules comprising:

an activation module for activating a power device;

a start and synchronization module for starting a transmit clock and synchronizing the transmit clock and associated PN generators after the activation module has activated the power device;

a probe module for sending a series of access probes from a sending device to a receiving device after the start and synchronization module has started the transmit clock and synchronized the transmit clock and associated PN generators with a system time;

a start timer module for setting a timer according to a predetermined time interval after the probe module has sent the series of access probes; and

a stop timer module for stopping the timer device.

41. The set of timer modules of Claim 40, wherein the predetermined time interval comprises a time unit in the range of one second to five seconds.

42. The set of timer modules of Claim 41, wherein the predetermined time interval further comprises a time unit in the range of two seconds to four seconds.

43. The set of timer modules of Claim 42, wherein the predetermined time interval further comprises approximately two seconds.

44. A system in a wireless communication network having a sending device with a power device, a receiving device, and a link, the system comprising:

a control device for governing an optimal time interval that limits the activation of the power device and permits transmission of signals from the sending device to the receiving device via the link.